WHAT IS CLAIMED IS:

1.   An image processing apparatus comprising:

first coding means for performing coding by band having a predetermined height;

5   first decoding means for decoding data coded by said first coding means into bitmap data;

memory means for storing the bitmap data for one band decoded by said first decoding means;

second coding means for encoding the bitmap data

10   stored in said memory means by a coding method selected from plural coding methods; and

second decoding means for selecting and performing a first decoding method capable of transferring the bitmap data to a printer engine in realtime, or a second

15   decoding method which needs to render the bitmap data before transferring the data to the printer engine, in accordance with the coding method selected by said second coding means,

wherein before coding is performed by said first

20   coding means, a decoding method performed by said second decoding means is predicted, and if the predicted decoding method is the second decoding method, the band height is reduced to half of that in case of the first decoding method.

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2.   An image processing apparatus comprising:

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memory means including a first area for storing
coded representation of image data and a second area for
storing raster image data of at least a band;

coded-representation forming means for translating
5   respective image data of plural bands into coded
representation and storing the coded representation into
said first area of said memory means;

rendering means for rendering the coded
representation from said first area into said second
10 area, in said memory means;

coding means for encoding the raster image data
rendered in said second area into coded data and storing
the coded data by page in said memory means;

decoding means for decoding the coded data;
15   decoding-method discrimination means for
discriminating whether decoding method performed by said
decoding means is a first decoding method capable of
transferring decoded raster image data to a printer
engine in real time, or a second decoding method for
20 rendering the decoded raster image data in a memory and
then transferring the data to the printer engine; and

band-height setting means for setting a band
height based on the result of discrimination by said
decoding-method discrimination means.

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3.   The image processing apparatus according to claim 2, wherein if decoding is performed by said second decoding method in accordance with the result of discrimination by said decoding-method discrimination means, said band-height setting means sets the band height to half of that in case of the first decoding method.

4.   The image processing apparatus according to claim 2, further comprising input means for inputting image data in page description language.

5.   The image processing apparatus according to claim 4, wherein said coded-representation forming means converts said page description language into coded representation including at least one of a bitmap object, a run length object, a trapezoidal object, a box object, and a fixed-boundary code object.

6.   The image processing apparatus according to claim 2, further comprising image-type discrimination means for discriminating an image type of said image data, wherein said coding means selects a coding method corresponding to the image type discriminated by said image-type discrimination means from plural coding

methods and performs coding by the selected coding
method.

7.   The image processing apparatus according to claim
2, further comprising release means for releasing said
first area in which said coded representation is stored
after storing the coded page by page in said memory
means by said coding means.

8.   An image processing method for encoding input
image data in band units and storing coded data for one
page, then transferring the coded data to a printer
engine while decoding the data, comprising:

a discrimination step of discriminating whether or
not a decoding method for temporarily rendering decoded
raster image data in a memory and then transferring the
data to the printer engine is used, based on input image
data; and

a band-height setting step of, if it is
discriminated at said discrimination step that said
decoding method is used, setting a band height to half
of that where said decoding method is not used.

9.   The image processing method according to claim 8,
further comprising:

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~~a translation step of translating the input image~~

data into coded representation by each band having the

height set at said band-height setting step;

a first storage step of storing said coded

5   representation;

a rendering step of rendering the stored coded

representation by band into a band raster image;

a second storage step of storing said rendered

band raster image;

10   a coding step of encoding the stored band raster

image and storing said coded data for one page; and

decode and transfer steps of temporarily rendering

coded data by band and then transferring the data to a

printer engine.

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10.   The image processing method according to claim 9,

wherein at said decoding and transfer steps, a memory

for two-band raster images is used as a double buffer,

and decode and transfer step are performed in parallel.

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11.   A storage medium containing program code, read and

executed by a computer, to function as an image

processing apparatus which encodes input image data by

band and stores coded data for one page, and transfers

25   the coded data to a printer engine while decoding the

data, said program code including:

program code for discriminating whether or not a

decoding method for temporarily rendering decoded raster

image data in a memory and then transferring the data to

the printer engine is used, based on input image data;

5   and

band-height setting program code for, if it is

discriminated that said decoding method is used, setting

a band height to half of that where said decoding method

is not used.